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## CARDIOVASCULAR ST ELEVATION MYOCARDIAL INFARCTION RECEIVING CENTERS CRITERIA AND DESTINATION POLICY

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### I. PURPOSE

A Cardiovascular ST Elevation Myocardial Infarction (STEMI) Receiving Center (SRC) will be the preferred destination for patients who access the 9-1-1 system meeting defined criteria and show evidence of a STEMI on a 12-lead electrocardiogram (ECG). These patients will benefit from rapid interventions via cardiac catheterization interventions.

### II. DEFINITIONS

**STEMI Base Hospital** - A licensed general acute care hospital that has emergency interventional cardiac catheterization capabilities that also function as a base hospital.

**STEMI Receiving Center (SRC)** - A licensed general acute care hospital that has emergency interventional cardiac catheterization capabilities.

**STEMI Referring Hospital (SRH)** - A licensed general acute care hospital that does not have emergency interventional cardiac catheterization capabilities.

### III. POLICY

The following requirements must be met for a hospital to be designated as a SRC by ICEMA:

- An ICEMA approved receiving hospital which is a full service acute care hospital.
- Licensure as a Cardiac Catheterization Laboratory (Cath Lab).
- Intra-aortic balloon pump capability.
- Cardiovascular surgical services permit.
- An alert/communication system for notification of incoming STEMI patients, available twenty-four (24) hours per day, seven (7) days per week (i.e., in-house paging system).
- Provide continuing education (CE) opportunities twice per year for emergency medical services (EMS) field personnel in areas of 12-lead ECG acquisition and interpretation, as well as assessment and management of STEMI patients.

#### IV. STAFFING REQUIREMENTS

The hospital will have the following positions filled prior to becoming a SRC:

- Medical Directors

The hospital shall designate two (2) physicians as co-directors of its SRC program. One (1) physician shall be a board certified interventional cardiologist with active Percutaneous Coronary Intervention (PCI) privileges. The co-director shall be a board certified emergency medicine physician with active privileges to practice in the emergency department.

- Nursing Coordinator

The hospital shall designate a SRC Nursing Coordinator who is trained or certified in Critical Care nursing.

- On-Call Physician Consultants and Staff

A daily roster of the following on-call physician consultants and staff that must be promptly available within thirty (30) minutes of notification.

- Cardiologist with PCI privileges.
- Cardiovascular Surgeon.
- Cardiac Catheterization Laboratory Team.
- Intra-aortic balloon pump nurse or technologist.

- Emergency Department Liaison Nurse

The non-base hospital shall designate an SRC Emergency Department Liaison Nurse who has a minimum of two (2) years emergency department experience to facilitate communication and education between the Cath Lab, emergency department and EMS field personnel.

#### V. INTERNAL HOSPITAL POLICIES

The hospital shall develop internal policies for the following situations:

- Fibrinolytic therapy protocol to be used only in unforeseen circumstances when PCI of a STEMI patient is not possible.

- Acknowledgement that STEMI patients may **only** be diverted during the times of Internal Disaster in accordance to ICEMA Reference #8060 - Requests for Hospital Diversion Policy (applies to physical plant breakdown threatening significant patient services or immediate patient safety issues, i.e., bomb threat, earthquake damage, hazardous material or safety and security of the hospital). A written notification describing the event must be submitted to ICEMA within twenty-four (24) hours.
- Prompt acceptance of STEMI patients from other SRHs that do not have PCI capability. STEMI diversion is not permitted except for internal disaster. Refer to ICEMA Reference #8120 - Continuation of Care (San Bernardino County Only). However, STEMI base hospitals are allowed to facilitate redirecting of STEMI patients to nearby SRCs when the closest SRC is over capacity to avoid prolonged door to intervention time. SRC and base hospitals shall ensure physician to physician contact when redirecting patients.
- Cath Lab Team activation policy which requires immediate activation of the team upon EMS notification when there is documented STEMI patient en route to the SRC, based on machine algorithm interpretation.

## **VI. DATA COLLECTION**

All required data elements shall be collected and entered in an ICEMA approved STEMI registry on a regular basis and submitted to ICEMA for review.

## **VII. CONTINUOUS QUALITY IMPROVEMENT PROGRAM (CQI)**

SRC shall develop an on-going CQI program which monitors all aspect of treatment and management of suspected STEMI patients and identify areas needing improvement. The program must, at a minimum, monitor the following parameters:

- Morbidity and mortality related to procedural complications.
- Detail review of cases requiring emergent rescue Coronary Artery Bypass Graph (CABG).
- Tracking of door-to-dilation time and adherence to minimum performance standards set by this policy.
- Detailed review of cases requiring redirection of EMS STEMI patients to other SRCs as a result of SRC over capacity and prolonged delay of door-to-intervention time.
- Active participation in each ICEMA STEMI CQI Committee and STEMI regional peer review process. This will include a review of selected medical

records as determined by CQI indicators and presentation of details to peer review committee for adjudication.

## VIII. PERFORMANCE STANDARD

SRCs must achieve and maintain a door-to-balloon (D2B) time of less than or equal to ninety (90) minutes in 75% of primary PCI patients with a STEMI, in accordance with D2B: An Alliance for Quality Guidelines. If this standard is not achieved, the SRC may be required to submit an improvement plan to ICEMA addressing the deficiency with steps being taken to remedy the problems.

## IX. DESIGNATION

- The SRC applicant shall be designated after satisfactory review of written documentation and an initial site survey by ICEMA or its designees and completion of an agreement between the hospital and ICEMA.
- Documentation of current accreditation from The Society of Chest Pain Centers as “Chest Pain Center with PCI” shall be accepted in lieu of a formal site visit by ICEMA.
- Initial designation as a SRC shall be in accordance with terms outlined in the agreement.
- Failure to comply with the agreement, criteria and performance standards outlined in this policy may result in probation, suspension or rescission of SRC designation.

## X. PATIENT DESTINATION

- The SRC should be considered as the destination of choice if all of the following criteria are met:
  - Identified STEMI patients based on machine interpretation of field 12-lead ECG, verified by EMT-Ps and approved by a base hospital physician.
  - Total transport time to the STEMI base hospital is thirty (30) minutes or less. Base hospital physician may override this requirement and authorize transport to the SRC with transport time of greater than thirty (30) minutes.
  - STEMI base hospital contact is **mandatory** for all patients identified as possible STEMI patient. The STEMI base hospital confirms a SRC as the destination.

- The STEMI base hospital is the only authority that can direct a patient to a SRC. The destination may be changed at STEMI base hospital discretion.
- The STEMI base hospital, if different from the SRC, will notify the SRC of patient's pending arrival as soon as possible, to allow timely activation of Cardiac Cath Lab Team at the SRC.
- If the patient chooses to bypass the recommended SRC, EMS field personnel must obtain an AMA and notify the STEMI base hospital.
- The following factors should be considered with regards to choice of destination for STEMI patients. STEMI base hospital contact and consultation is mandatory in these and similar situations:
  - Patients with unmanageable airway, unstable cardiopulmonary condition, or in cardiopulmonary arrest should be transported to the closest receiving hospital.
  - Patients with malignant ventricular fibrillation, ventricular tachycardia, second degree type II heart block and third degree heart blocks should be considered for transport to the closest receiving hospital.
  - Patients with obvious contraindication to thrombolytic therapy should be strongly considered for transport to the closest SRC.
  - Patients with hemodynamic instability as exhibited by blood pressure less than 90 systolic and/or signs of inadequate tissue perfusion should be transported to the closest receiving hospital.
  - Patients with *sustained* ROSC should be strongly considered for transport to the closest SRC. STEMI base hospital contact must be made.

## XI. REFERENCES

<u>Number</u>	<u>Name</u>
8060	Requests for Hospital Diversion Policy (San Bernardino County Only)
8120	Continuation of Care (San Bernardino County Only)